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Preliminary Amendment

AMENDMENTS TO THE CLAIMS

Claims 1-18 were originally pending. Claims 1-18 are canceled. Claims 19-29 are added. Accordingly, claims 19-29 are currently pending. The following listing of claims replaces all prior versions and listings of claims in the application.

1-18 (Canceled).

19.   (New) A method of minimizing latency for streaming time-varying multimedia content, the method comprising:

constructing an encoded bit stream for the content, the encoded bit stream having an initial portion represented with a low resolution encoding and a subsequent portion represented with an encoding having a higher resolution than the low resolution encoding; and

transmitting the encoded bit stream to a client buffer so that the client buffer receives the initial portion faster than the initial portion is removed from the client buffer during real-time playback of the content;

wherein transmitting the initial portion faster than a real-time playback rate reduces the latency due to buffering to near zero.

20.   (New) The method of minimizing latency as claimed in claim 1, wherein the act of constructing an encoded bit stream is performed by an encoder having a buffer that starts out non-empty.

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21.   (New) The method of minimizing latency as claimed in claim 1, wherein the act of constructing an encoded bit stream is performed by reducing a number of enhancement layers in an embedded bit stream to produce the initial portion of the content.

22.   (New) The method of minimizing latency as claimed in claim 1, wherein the act of constructing an encoded bit stream is performed by splicing together one or more low resolution encodings for the initial portion of the content with a higher resolution encoding for the subsequent portion of the content.

23.   (New) A computer system for receiving and playing back multimedia content, the computerized system comprising:

a buffer;

a processor;

a memory operatively coupled to the processor; and

an application executed in the processor from the memory which enables the system to receive multimedia data over a network wherein the multimedia data is received as an encoded bit stream having an initial portion and a subsequent portion so that the buffer receives the initial portion faster than the initial portion is removed from the buffer during real-time playback of the multimedia data.

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24.   (New) A computer readable medium having instructions stored thereon for causing a computer to perform a method of minimizing latency for streaming time-varying multimedia content, the method comprising:

constructing an encoded bit stream for the content, the encoded bit stream having an initial portion represented with a low resolution encoding and a subsequent portion represented with an encoding having a higher resolution than the low resolution encoding; and

transmitting the encoded bit stream to a client buffer so that the client buffer receives the initial portion faster than the initial portion is removed from the client buffer during real-time playback of the content to permit beginning playback of the initial portion without significant buffering.

25.   (New) The computer readable medium of claim 22, wherein the act of constructing an encoded bit stream is performed by an encoder having a buffer that starts out non-empty.

26.   (New) The computer readable medium of claim 22, wherein the act of constructing an encoded bit stream is performed by reducing a number of enhancement layers in an embedded bit stream to produce the initial portion of the content.

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27.   (New) The computer readable medium of claim 22, wherein the act of constructing an encoded bit stream performed by splicing together one or more low resolution encodings for the initial portion of the content with a normal resolution encoding for the subsequent portion of the content.

28.   (New) A computer readable medium having instructions stored thereon for causing a computer to perform a method of delivering time-varying multimedia content, the method comprising:

an application for execution in a processor to deliver multimedia data over a network to a client buffer wherein the multimedia data is transmitted as an encoded bit stream having an initial portion and a subsequent portion so that the client buffer receives the initial portion faster than the initial portion is removed from the client buffer during real-time playback of the content.

29.   (New) The computer readable medium of claim 26, wherein the application constructs the encoded bit stream having the initial portion represented with a low resolution encoding and the subsequent portion represented with an encoding having a higher resolution than the low resolution encoding.

LEE & HAYES, PLLC   6   MSI-845USCI.M01

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